

# Abbreviations

update: 2008/04/03, K. Oisaki

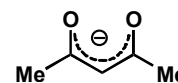
## A

AAA asymmetric allylic alkylation

Ac acetyl



acac acetylacetonate

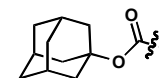


Ad 1-adamantyl



AD asymmetric dihydroxylation

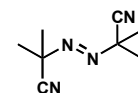
Adoc 1-adamantylloxycarbonyl



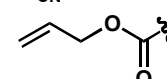
ADMET acyclic diene polymerization

AE asymmetric epoxidation

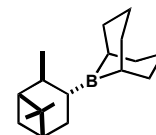
AIBN 2,2'-azobisisobutyronitrile



Alloc allyloxycarbonyl



Alpine Borane B-isopinocampheyl-9-borabicyclo [3.3.1] nonane



Am amyl

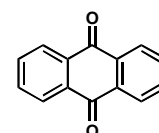


amu atomic mass unit

anhyd. Anhydrous

aq. Aqueous or water solution

AQN anthraquinone



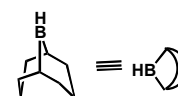
Ar aryl or argon

atm atmosphere

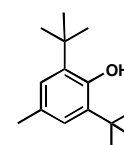
au atomic unit

## B

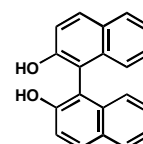
9-BBN 9-borabicyclo[3.3.1]nonane

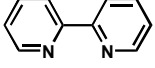
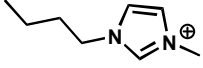
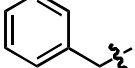
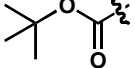
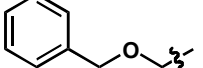
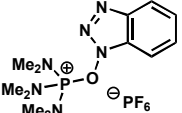
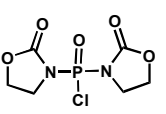
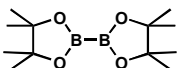
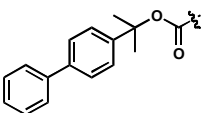
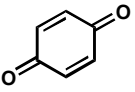
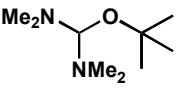
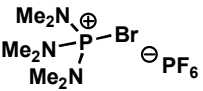
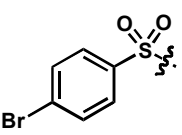
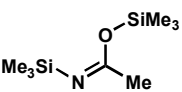
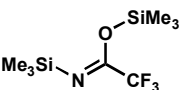
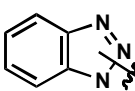
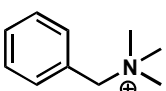






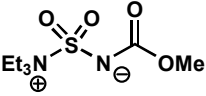
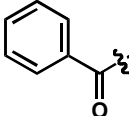
BHT 2,6-di-*t*-butyl-*p*-cresol



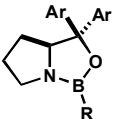
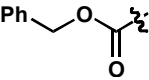
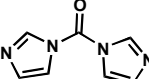
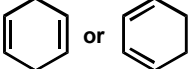
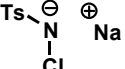
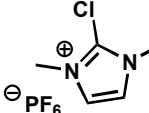
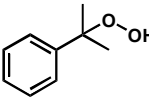
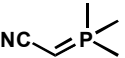

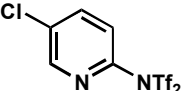
BINOL 1,1'-bi-2,2'-naphthol

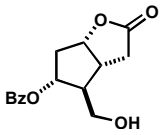


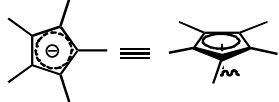
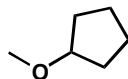
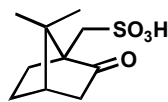
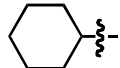


bipy or bpy	2,2'-bipyridyl	
bmim	1-butyl-3-methylimidazolium cation	
BMS	borane-dimethyl sulfide complex	
Bn	benzyl	
Boc	<i>t</i> -butoxycarbonyl	
BOM	benzyloxymethyl	
BOP	benzotriazol-1-yloxytris(dimethylamino)phosphonium hexafluorophosphate	
BOP-Cl	bis(2-oxo-3-oxazolidiny)phosphinic chloride	
b. p. or bp	boiling point	
B <sub>2</sub> Pin <sub>2</sub> (Bpin) <sub>2</sub>	or bis(pinacolato)diboron	
Bpoc	1-methyl-1-(4-biphenyl)ethoxycarbonyl	
BQ	benzoquinone	
Bredereck's reagent	<i>t</i> -butoxybis(dimethylamino)methane	
BroP	Bromotris(dimethylamino)phosphonium hexafluorophosphate	
Bs	<i>p</i> -bromobenzenesulfonyl (brosyl)	
BSA	<i>N,O</i> -bis(trimethylsilyl)acetamide	
BSTFA	<i>N,O</i> -bis(trimethylsilyl)trifluoroacetamide	
Bt	1- or 2-benzotriazol	
BTA	benzyltrimethylammonium cation	
<sup><i>i</i></sup> Bu	<i>iso</i> -butyl	
<i>sec</i> -Bu	<i>secondary</i> -butyl	

<sup>n</sup> Bu	<i>normal</i> -butyl	
<sup>t</sup> Bu	<i>tertiary</i> -butyl	
Burgess' reagent	Methoxycarbonylsulfamoyl)triethylammonium Hydroxide, Inner Salt	
Bz	benzoyl	

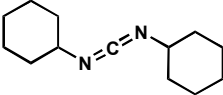
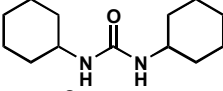
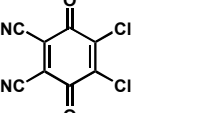
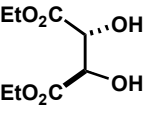

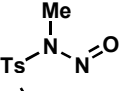
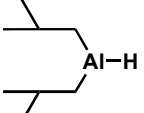
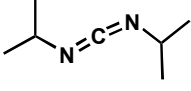
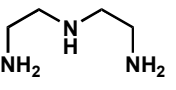
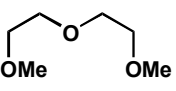
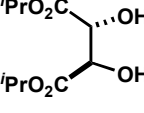
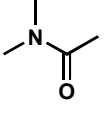
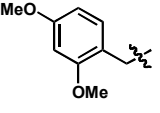
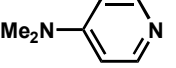
## C

CAMCR	catalytic asymmetric multicomponent reaction	
CAN	ceric ammonium nitrate	$(\text{NH}_4)_2[\text{Ce}(\text{NO}_3)_6]$
cat.	Catalyst or catalytic amount of	
CBS catalyst		
Cbz or Z	benzyloxycarbonyl	
CD	circular dichromism or cyclodextrin	
CDI	carbonyl diimidazole	
CHD	1,3- or 1,4-cyclohexadiene	
chromamine-T	<i>p</i> -toluenesulfonchloramide sodium salt	
CI-MS	chemical ionization mass spectrometry	
CIP	2-chloro-1,3-dimethylimidazolidinium hexafluorophosphate	
CMHP	cumene hydroperoxide	
CMMP	cyanomethylenetriethyl phosphorane	
COD	1,5-cyclooctadiene	
Collins' reagent	dipyridine chromium(VI) oxide	$\text{CrO}_3(\text{Py})_2$
Collman's reagent	disodium tetracarbonylferrate	$\text{Na}_2\text{Fe}(\text{CO})_4$
Comin's reagent	2-[ <i>N,N</i> -bis(trifluoromethylsulfonyl)amino]-5-chloropyridine	
conc.	Concentrated	

conv.	Conversion	
Corey lactone	(3 <i>aR</i> ,4 <i>S</i> ,5 <i>R</i> ,6 <i>aS</i> )-(-)-5-(benzoyloxy)-hexahydro-4(-hydroxymethyl)-2H-cyclopenta[ <i>b</i> ]furan-2-one	
COSY	correlation spectroscopy	
COT	cyclooctatetraene	
Cp	cyclopentadienyl	
Cp*	1,2,3,4,5-pentamethyl cyclopentadienyl	
CPME	cyclopentylmethyl ether	
Crabtree's catalyst	( <i>SP</i> -4)tris(cyclohexyl)phosphane [(1-2-η:5-6-η)-cycloocta-1,5-diene] pyridineiridium hexafluoridophosphate	[Ir(cod)(py)(PCy <sub>3</sub> )]P F <sub>6</sub>
CSA	(1 <i>S</i> )-(+)-10-comphorsulfonic acid	
CSI	chlorosulfonyl isocyanate	ClSO <sub>2</sub> NCO
CSI-MS	cold spray ionization mass spectrometry	
CT	charge transfer	
<sup>o</sup> Hex or Cy	cyclohexyl	

## D

d	days	
Δ	heat	
DABCO	1,4-diazabicyclo[2.2.2]octane	
DAIB	3- <i>exo</i> -dimethylaminoisoborneol	
DAST	diethylaminosulfer trifluoride	
dba	dibenzylideneacetone	
DBN	1,5-diazabicyclo[4.3.0]non-5-ene	
DBU	1,8-diazabicyclo[5.4.0]undec-7-ene	
DCB	1,2-dichlorobenzene	

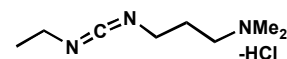
DCC	dicyclohexylcarbodiimide	
DCE	1,2-dichloroethane	$\text{ClCH}_2\text{CH}_2\text{Cl}$
DCM	dichloromethane	$\text{CH}_2\text{Cl}_2$
DCU	<i>N,N'</i> -dicyclohexylurea	
DDQ	2,3-dichloro-5,6-dicyano-1,4-benzoquinone	
DEAD	diethyl azodicarboxylate	$\text{EtO}_2\text{C}-\text{N}=\text{N}-\text{CO}_2\text{Et}$
deg	degree	
DEIPS	diethylisopropylsilyl	$\text{Et}_2\text{PrSi-}$
DET	diethyl tartrate	
DHP	3,4-dihydro-2H-pyran	
DIAD	diisopropyl azodicarboxylate	${}^i\text{PrO}_2\text{C}-\text{N}=\text{N}-\text{CO}_2{}^i\text{Pr}$
Diazald	<i>p</i> -toluenesulphonylmethylnitrosamide	
DIBAL	or diisobutylaluminium hydride	
DIBAH		
DIC	diisopropyl carbodiimide	
dien	diethylenetriamine	
diglyme	diethylene glycol dimethyl ether	
DIPEA	diisopropylethylamine	${}^i\text{Pr}_2\text{NEt}$
DIPA	diisopropylamine	${}^i\text{Pr}_2\text{NH}$
DIPT	diisopropyl tartrate	
DMA	<i>N,N</i> -dimethylacetamide	
DMB	dimethoxybenzyl	
DMAD	dimethyl acetylenedicarboxylate	$\text{MeO}_2\text{C}-\text{C}\equiv\text{C}-\text{CO}_2\text{Me}$
DMAP	4-(dimethylamino)pyridine	

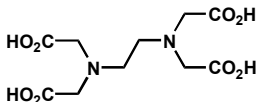
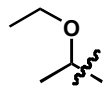
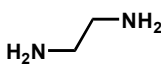
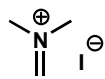
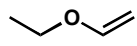
DMDO	dimethyldioxirane	
DME	1,2-dimethoxyethane	
DMF	<i>N,N</i> -dimethylformamide	
DMG	directed metalation group	
DMI	1,3-dimethylimidazolidine-2-one	
DMP	Dess-Martin periodinane	
DMPU	1,3-dimethyl-3,4,5,6-tetrahydro-2(1H)-pyrimidone	
DMS	dimethylsulfide	$\text{Me}_2\text{S}$
DMSO	dimethylsulfoxide	
DMTr	4,4'-dimethoxytrityl	
DNPH	2,4-dinitrophenylhydrazine	
DNs	2,4-dinitrobenzenesulfonyl	
DoM	directed ortho metalation	
Dpp	diphenylphosphinyl	
Drierite	anhydrous calcium sulfate	$\text{CaSO}_4$
DPPA	diphenylphosphinyl azide	
DTBB	4,4'-di- <i>t</i> -butylbiphenyl	
DTBMP	2,6-di- <i>t</i> -butyl-4-methylpyridine	
DTBP	2,6-di- <i>t</i> -butylpyridine	
dr	diastereomeric ratio	

## E

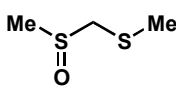
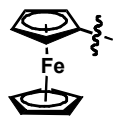
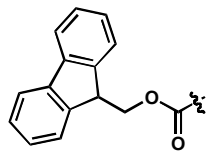
*E* entgegen

EDC or 1-ethyl-3-(3-dimethylaminopropyl)carbodiimide hydrochloride



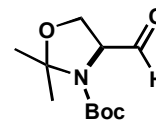
EDG	electron donating group	
EDTA	ethylenediamine tetraacetic acid	
EE	1-ethoxyethyl	
ee	enantiomeric excess	
EI-MS	electron impact mass spectrometry	
en	ethylenediamine	
ENDOR	electron-nuclear double resonance	
EPR	electron paramagnetic resonance	
eq or equiv	equivalent	
Eschenmoser reagent	NN-dimethylmethyleammonium iodide	
ESI-MS	electrospray ionization mass spectrometry	
ESR	electron spin resonance	
Et	ethyl	
ET	electron transfer	
EVE	ethyl vinyl ether	
EWG	electron withdrawing group	
EXAFS	extended X-ray absorption fine structure	
EXSY	exchange spectroscopy	

## F

FAB-MS	fast atom bombardment mass spectrometry	
FAMSO	formaldehyde dimethyldithioacetal <i>S</i> -oxide	
Fc	ferrocenyl	
Fetizon's reagent	silver carbonate – celite	$\text{Ag}_2\text{CO}_3$
FMO	frontier molecular orbital	
Fmoc	9-fluorenylmethoxycarbonyl	
FG	functional group	
fp or f.p.	flash point	
FRET	fluorescence resonance energy transfer	
FT-IR	Fourier transfer infrared spectroscopy	
FT-NMR	Fourier transfere nuclear magnetic resonance	
FVP	flash vacuum pyrolysis	

## G

Garner's aldehyde *N*-Boc-*N,O*-isopropylideneserinal

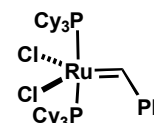


GC gas chromatography

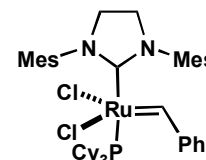
*gem* *geminal*

GPC gel permeation chromatography

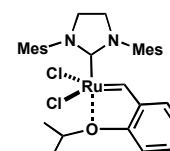
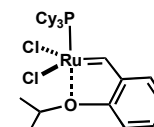
Grubbs' 1<sup>st</sup> generation catalyst



Grubbs' 2<sup>nd</sup> generation catalyst



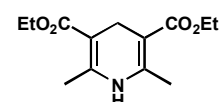
Grubbs-Hoveyda catalyst



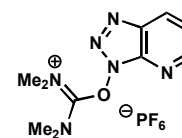
## H

h or hr hour

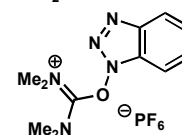
Hantzsch ester diethyl 1,4-dihydro-2,6-dimethyl-3,5-pyridinedicarboxylate



HATU *O*-(7-azabenzotriazol-1-yl)-*N,N,N',N'*-tetramethyluronium hexafluorophosphate

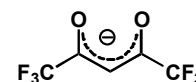


HBTU *O*-(benzotriazol-1-yl)-*N,N,N',N'*-tetramethyluronium hexafluorophosphate



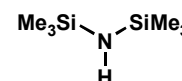
Het heterocycles

hfa hexafluoroacetylacetonate

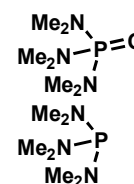


HMBC H-detected multiple-bond heteronuclear multiple quantum coherence

HMDS 1,1,1,3,3,3-hexamethyldisilazane



HMPA hexamethylphosphoramide

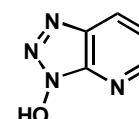


HMPT hexamethylphosphorous triamide



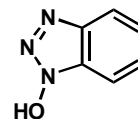
hv irradiation with light

HOAt 1-hydroxy-7-azabenzotriazole





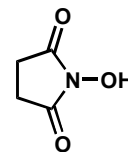
HOBt 1-hydroxybenzotriazole



HOHAHA homonuclear Hartmann-Hahn spectrum

HOMO highest occupied molecular orbital

HOSu *N*-hydroxysuccinimide

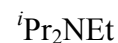


HPLC high performance liquid chromatography

HSAB hard and soft acids and bases

HTS high throughput screening

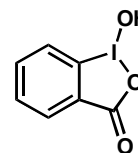
Hunig's base diisopropylethylamine



HWE reaction Horner-Wadsworth-Emmons reaction

## I

IBX 2-iodoxybenzoic acid



Imid or Im imidazole



INADEQUATE incredible natural abundance double quantum transference experiment

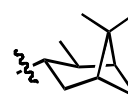
INDOR internuclear double resonance

INEPT insensitive nuclei enhanced by polarization transfer

IPA isopropyl alcohol



Ipc isopinocampheyl



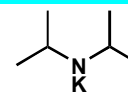
IUPAC International Union of Pure and Applied Chemistry

IR infrared spectroscopy

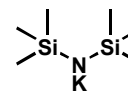
## J

## K

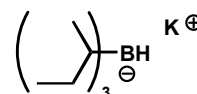
KDA potassium diisopropylamide



KHMDS potassium hexamethyldisilazide



K-Selectride potassium tri-*s*-butylborohydride



## L

LA or L.A. Lewis acid

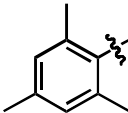
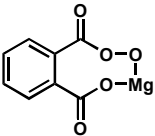
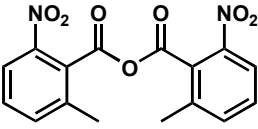
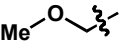
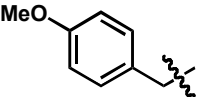

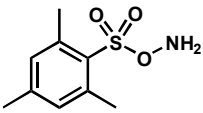
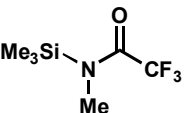
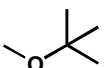
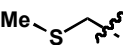
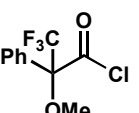
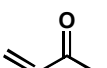
LAH lithium aluminium hydride



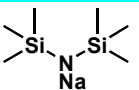
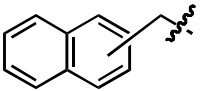
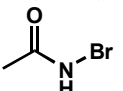
Lawesson's reagent	2,4-bis(4-methoxyphenyl)-1,3-dithia-2,4-diphosphetane-2,4-disulfide	
LB or L.B.	Lewis base	
LD	lethal dose	
LDA	lithium diisopropylamide	
LDBB	Lithium 4,4'-di- <i>t</i> -butylbiphenylide	
LHMDS	lithium hexamethyldisilazide	
LICA	lithium isopropylcyclohexylamide	
liq.	Liquid	
LTA	lead tetraacetate	Pb(Oac) <sub>4</sub>
LiTMP	lithium 2,2,6,6-tetramethylpiperidide	
LLB	LaLi <sub>3</sub> tris(binaphthoxide)	
L-Selectride	lithium tri- <i>s</i> -butylborohydride	
LUMO	lowest unoccupied molecular orbital	


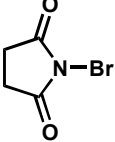
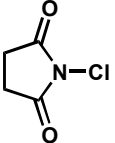
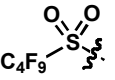
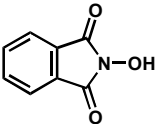
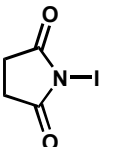
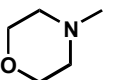
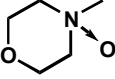
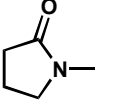
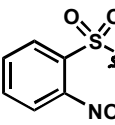
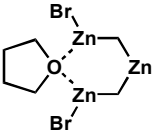
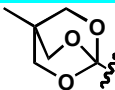
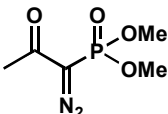
## M

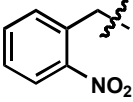
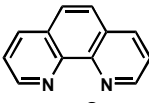
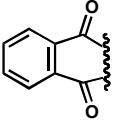
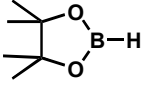
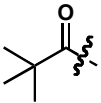
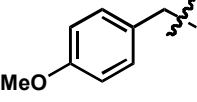
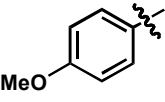
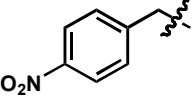

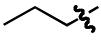
MAC	masked acyl cyanide	
MAD	methyl aluminium bis(2,4,6-tri- <i>t</i> -butyl-4-methylphenoxide)	
MALDI	matrix-assisted laser desorption ionization	
Mander's reagent	methoxycarbonyl cyanide	
MAO	methylaluminumoxane	
Matrin sulfurane	Bis[ $\alpha,\alpha$ -bis(trifluoromethyl)benzenemethanolato]diphenylsulfur	
Mbs	<i>p</i> -methoxybenzenesulfonyl	
mCPBA	<i>m</i> -chloroperbenzoic acid	
Me	methyl	
Meldrum's acid	2,2-dimethyl-1,3-dioxane-4,6-dione	
MEM	2-methoxyethoxymethyl	

Mes	mesityl (2,4,6-trimethylphenyl)	
min	minute	
MMPP	magnesium monoperoxyphthalate	
MMTr	<i>p</i> -methoxyphenyldiphenylmethyl	
MNBA	2-methyl-6-nitrobenzoic anhydride	
MO	molecular orbital	
MOM	methoxymethyl	
MPM	<i>p</i> -methoxybenzyl	
mp or m.p.	melting point	
Ms	methanesulfonyl (mesyl)	
MS	molecular sieves	
MSH	<i>o</i> -mesitylenesulfonyl hydroxylamine	
MSTFA	<i>N</i> -methyl- <i>N</i> -(trimethylsilyl)trifluoroacetamide	
MTBE	methyl <i>tert</i> -butyl ether	
MTM	methylthiomethyl	
MTO	methyltrioxorhenium	MeReO <sub>3</sub>
MTPA-Cl	$\alpha$ -methoxy- $\alpha$ -trifluoromethyl-phenylacetyl chloride	
MVK	methyl vinyl ketone	
M.W.	molecular weight	
$\mu$ W	microwave	

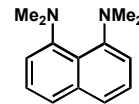
## N

NaHMDS	sodium hexamethyldisilazide	
Naph or Np	naphthyl	
NBA	<i>N</i> -bromoacetamide	

nbD	norbornadiene	
NBS	<i>N</i> -bromosuccinimide	
NCS	<i>N</i> -chlorosuccinimide	
Nf	nonafluorobutanesulfonyl	
NHPI	<i>N</i> -hydroxyphthalimide	
NICS	nucleus-independent chemical shift	
NIS	<i>N</i> -iodosuccinimide	
NMM	<i>N</i> -methylmorpholine	
NMO	<i>N</i> -methylmorpholine oxide	
NMP	<i>N</i> -methylpyrrolidinone	
NMR	nuclear magnetic resonance	
NOE	nuclear Overhauser effect	
NOESY	nuclear Overhauser effect spectroscopy	
NR or n.r.	no reaction	
Ns	nitrobenzenesulfonyl (nosyl)	
Nysted reagent	cyclo-dibromodi-μ-methylene[μ-(tetrahydrofuran)]trizinc	
Nu or Nuc	nucleophile	
<b>O</b>		
OBO	2,6,7-trioxabicyclo[2.2.2]octyl	
Ohira-Bestmann reagent	dimethyl-1-diazo-2-oxopropylphosphonate	

<i>o</i> NB	<i>o</i> -nitrobenzyl	
ORD	optical rotatory dispersion	
Oxone		2KHSO <sub>5</sub> /KHSO <sub>4</sub> /K <sub>2</sub> SO <sub>4</sub>
<b>P</b>		
PCC	pyridinium chlorochromate	(PyH)ClCrO <sub>3</sub>
PCR	polymerase chain reaction	
PDC	pyridinium dichromate	(PyH) <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub>
PEG	polyethylene glycol	
Petasis reagent	bis(η <sup>5</sup> -cyclopentadienyl)dimethyltitanium	Cp <sub>2</sub> TiMe <sub>2</sub>
PG	protective group	
Ph	phenyl	
Phen	1,10-phenanthroline	
Phth	phthaloyl	
PIDA	phenyliodonium diacetate	PhI(OAc) <sub>2</sub>
PIFA	phenyliodonium bis(trifluoroacetate)	PhI(OCOCF <sub>3</sub> ) <sub>2</sub>
PinBH	pinacolborane	
Piv	pivaloyl	
PLE	pig liver esterase	
PMB	<i>p</i> -methoxybenzyl	
PMP	<i>p</i> -methoxyphenyl	
<i>p</i> NB	<i>p</i> -nitrobenzyl	
PPA	polyphosphoric acid	
ppb	parts per billion	
PPL	Porcine pancreatic lipase	
ppm	parts per million	
PPTS	pyridinium <i>p</i> -toluenesulfonate	(PyH)Ots
<sup>i</sup> Pr	isopropyl	
<sup>n</sup> Pr	<i>normal</i> -propyl	

Proton sponge 1,8-Bis(dimethylamino)naphthalene

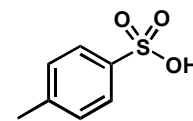


psi pounds per square inch

P.T. proton transfer

PTC phase-transfer catalyst

PTSA *p*-toluenesulfonic acid



Py or Pyr pyridine or pyridyl



## Q

## R

R alkyl

*R* *rectus*

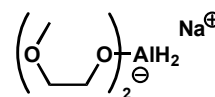
*rac* racemic

RCAM ring-closing alkyne metathesis

RCM ring-closing metathesis

rds rate-determining step

Red-Al sodium bis(2-methoxyethoxy)aluminium hydride

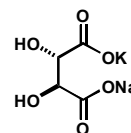


$R_f$  perfluoroalkyl group

$R_f$  retention factor in chromatography

RI refractive index or radio isotope

Rochelle salt potassium sodium tartrate



ROESY rotating frame nuclear Overhauser and exchange spectroscopy

ROM ring-opening metathesis

ROMP ring-opening metathesis polymerization

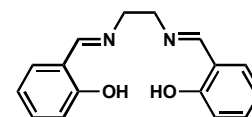
rt room temperature

## S

*S* *sinister*

s seconds

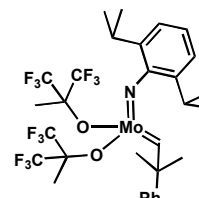
salen *N,N'*-ethylenebis(salicylideneiminato)



Schlosser's base

*n*-BuLi/*t*-BuOK

Schrock's catalyst



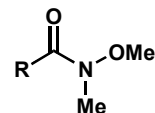
Schwartz's reagent	chloridobis( $\eta^5$ -cyclopentadienyl)hydrido­zirconium	$\text{Cp}_2\text{ZrHCl}$
SEM	2-(trimethylsilyl)ethoxymethyl	
SES	2-(trimethylsilyl)ethanesulfonyl	
SET	single electron transfer	
Sia	siamyl ( <i>s</i> -isoamyl)	
SOMO	single occupied molecular orbital	
STM	scanning tunneling microscope	
Stryker's reagent	triphenylphosphine-copper(I) hydride hexamer	$[\text{Ph}_3\text{PCuH}]_6$
Super-Hydride	lithium triethylborohydride	$\text{LiHBEt}_3$
<b>T</b>		
TASF	tris(diethylamino)sulfonium difluorotrimethylsilicate	$[(\text{Et}_2\text{N})_3\text{S}][\text{Me}_3\text{SiF}_2]$
TBAB	tetrabutylammonium bromide	${}^n\text{Bu}_4\text{NBr}$
TBAC	tetrabutylammonium chloride	${}^n\text{Bu}_4\text{NCl}$
TBAF	tetrabutylammonium fluoride	${}^n\text{Bu}_4\text{NF}$
TBAI	tetrabutylammonium iodide	${}^n\text{Bu}_4\text{NI}$
TBAT	tetrabutylammonium triphenyldifluorosilicate	$[{}^n\text{Bu}_4\text{N}][\text{Ph}_3\text{SiF}_2]$
TBS	or <i>tert</i> -butyldimethylsilyl	
TBDMS		
TBDPS	<i>tert</i> -butyldiphenylsilyl	
TBHP	<i>tert</i> -butylhydroperoxide	
TCDI	thiocarbonyldiimidazole	
TCA	trichloroacetic acid	$\text{Cl}_3\text{CCO}_2\text{H}$
TCE	2,2,2-trichloroethanol	$\text{Cl}_3\text{CCH}_2\text{OH}$
TDAE	tetrakis(dimethylamino)ethane	
TEA	triethylamine	$\text{Et}_3\text{N}$
TEAB	tetraethylammonium bromide	$\text{Et}_4\text{NBr}$
TEAC	tetraethylammonium chloride	$\text{Et}_4\text{NCl}$
TEAI	tetraethylammonium iodide	$\text{Et}_4\text{NI}$
TEMPO	2,2,6,6-tetramethylpiperidinyloxy	
Teoc	2-(trimethylsilyl)ethoxycarbonyl	
TES	triethylsilyl	
temp.	temperature	

Tf	trifluoromethanesulfonyl	
TFA	trifluoroacetic acid	CF <sub>3</sub> CO <sub>2</sub> H
TFAA	trifluoroacetic anhydride	(CF <sub>3</sub> CO) <sub>2</sub> O
TFE	2,2,2-trifluoroethanol	CF <sub>3</sub> CH <sub>2</sub> OH
Thexyl	<i>tert</i> -hexyl	
THF	tetrahydrofuran	
THP	tetrahydropyran or 2-tetrahydropyranyl	
TIPS	triisopropylsilyl	
TLC	thin layer chromatography	
TM	target molecule	
TMEDA	<i>N,N,N',N'</i> -tetramethylethylenediamine	
TMG	1,1,3,3-tetramethylguanidine	
TMS	trimethylsilyl or tetramethylsilane	
TosMIC	toluenesulfonylmethyl isocyanide	
TOF	time-of-flight or turnover frequency	
tol or tolyl	methylphenyl	
TON	turnover number	
Ts	<i>p</i> -toluenesulfonyl	
Tp	trispyrazoryl borate	
Tp*	tris(2,4-dimethylpyrazoryl)borate	
TPAP	tetra- <i>n</i> -propylammonium perruthenate	<sup>n</sup> Pr <sub>4</sub> N RuO <sub>4</sub>
Tr	triphenylmethyl	Ph <sub>3</sub> C-
trien	triethylenetetramine	
Triton B	Benzyltrimethylammonium hydroxide	BnNMe <sub>3</sub> OH
Troc	2,2,2-trichloroethoxycarbonyl	
TS	transition state	
<b>U</b>		
UV	ultraviolet	
<b>V</b>		
<i>vic</i>	<i>vicinal</i>	
Vilsmeier's reagent	<i>N</i> -Chloromethylene- <i>N,N</i> -dimethyl ammonium chloride	

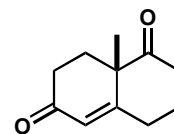


**W**

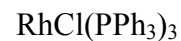
Weinreb amide *N,O*-dimethylhydroxamic acids



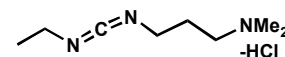
Wieland-Miescher ketone 8a-methyl-3,4,7,8-tetrahydro-2H-naphthalene-1,6-dione



Wilkinson's catalyst chlorotris(triphenylphosphine)rhodium(I)



WSC or WSCI water-soluble carbodiimide

**X**

XAFS X-ray absorption fine structure

XANES X-ray absorption near edge structure

XRD X-ray diffraction

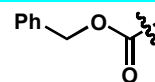
xyl or xylyl 3,5-dimethylphenyl

**Y**

y. yield

**Z**

Z benzyloxycarbonyl



Z *zusammen*

# Ligand Name and Structures

